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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/781,877	02/20/2004	Chi-Ho Hsu	BHT-3111-416	5091
7590 04/25/2005			EXAMINER	
BRUCE H. TROXELL SUITE 1404 5205 LEESBURG PIKE FALLS CHURCH, VA 22041			NGUYEN, LINH M	
			ART UNIT	PAPER NUMBER
			2816	

DATE MAILED: 04/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/781,877

Applicant(s)

HSU ET AL.

Examiner

Linh M. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claims 1-13 are presented in the instant application according to the Applicants' filing on 02/20/2004.

Inventorship

1. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Drawings Objection

2. The drawings are objected to because of lacking "Prior Art" label in figures 1 and 2.

3. Figures 1-2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Appropriate correction is required.

Claim Objections/Minor Informalities

4. Claims 1 and 7 are objected to because of the following informalities:

Claim 1, line 3, change ". The" to -- ; the --;

line 4, change ". " to -- ; --;

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line 9, change "potential-conversing" to -- potential-converting--;

Claim 7, line 10, change "potential-conversing" to -- potential-converting--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 1, line 1, the recitation "*capable of*" renders the claim indefinite. CAPABLE OF it has been held that the recitation that an element is "capable of" performing a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. In re Hutchison, 69 USPQ 138.

Still with respect to claim 1, lines 7-8, the recitation "*a first timing clock signal, which has a lower voltage potential*" renders the claim indefinite since it is not clear that the signal's potential is lower than what or in other words it lacks a specified reference for the comparison.

Still with respect to claim 1, lines 10-11, the recitation "*a second timing clock signal, which has a higher voltage potential*" renders the claim indefinite since it is not clear that the signal's potential is higher than what or in other words it lacks a specified reference for the comparison.

With respect to claim 7, line 1, similarly as indicated above, the recitation "*capable of*" renders the claim indefinite. CAPABLE OF it has been held that the recitation that an element is

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"capable of" performing a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. In re Hutchison, 69 USPQ 138.

Still with respect to claim 7, lines 8-9, similarly as stated above, the recitation "*a first timing clock signal, which has a lower voltage potential*" renders the claim indefinite since it is not clear that the signal's potential is lower than what or in other words it lacks a specified reference for the comparison.

Still with respect to claim 7, lines 11-12, similarly as indicated above, the recitation "*a second timing clock signal, which has a higher voltage potential*" renders the claim indefinite since it is not clear that the signal's potential is higher than what or in other words it lacks a specified reference for the comparison.

Claims 2-6 and 8-13 are also rejected under 35 U.S.C. 112, second paragraph because of their dependency on claim 1 and 7, respectively.

Clarification is required.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamashiro et al. (U.S. Patent No. 4,428,040).

With respect to claim 1, as best understood, Yamashiro et al. discloses, in Fig. 1, a circuit for providing stable timing clock, which includes a) a step-down clamping circuit [P1, P2, 1, 2, 11, 12] which has an input side to input first voltage [P1], and an output side to output second voltage [12]; the first voltage passing step down and clamp to output second voltage; b) an oscillating circuit [3, 5, 6, 13], which is coupled to the clamping circuit and is an oscillating circuit that takes the second voltage as a operating voltage to further generate a first timing clock signal, which has a lower voltage potential, and c) a voltage potential-conversing circuit [7], which is coupled to the oscillating circuit to convert the first timing clock signal into a second timing clock signal, which has a higher voltage potential.

With respect to claim 2, Yamashiro et al. discloses, in Fig. 1, that the first voltage is characterized in that there are large variations for both rippling wave and voltage potential.

With respect to claim 3, Yamashiro et al. discloses, in Fig. 1, that the second voltage is an ideal DC voltage [*battery*].

With respect to claim 4, Yamashiro et al. discloses, in Fig. 1, that the second voltage is smaller than the first voltage [*via step down circuit*]

With respect to claim 5, Yamashiro et al. discloses, in Fig. 1, that the step-down clamping circuit further includes a resistance [R1], a capacitance [C2], and a clamping circuit [Q15].

With respect to claim 6, Yamashiro et al. discloses, in Fig. 1, that the clamping circuit includes a P-type metal oxide semiconductor PMOS [Q8, Q14, Q21] and an N-type metal oxide semiconductor NMOS [Q1-Q4].

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 7-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamashiro et al. (U.S. Patent No. 4,428,040) in view of Applicant Admitted Prior Art, Fig. 2.

With respect to claim 7, as best understood, Yamashiro et al. discloses, in Fig. 1, a circuit for providing stable timing clock, which includes a) a step-down clamping circuit [P1, P2, 1, 2, 11, 12], to receive the first voltage [P1], and which is able to output a second voltage [I2], b) an oscillating circuit [3, 5, 6, 13], which is coupled to the clamping circuit and is an oscillating circuit that takes the second voltage as a operating voltage to further generate a first timing clock signal, which has a lower voltage potential, and c) a voltage potential-conversing circuit [7], which is coupled to the oscillating circuit to convert the first timing clock signal into a second timing clock signal, which has a higher voltage potential.

Yamashiro et al.' circuit lacks a rectifying circuit, which may convert an AC voltage into a DC voltage that is a first voltage.

The Applicant Admitted Prior Art, Fig. 3, discloses a rectifying circuit [22] for converting an AC voltage to a DC voltage.

To configure the circuit of Yamashiro et al. with a rectifying circuit, as taught by the Applicant Admitted Prior Art, Fig. 2, for AC to DC voltage conversion would have been obvious

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to one of ordinary skill in the art at the time of the invention since the rectifier provides the capability to utilize versatile and low cost AC voltage in a DC voltage device.

With respect to claim 8, the combined teaching of Yamashiro et al., Fig. 1, and Applicant Admitted Prior Art, Fig. 2, discloses that the first voltage is characterized in that there are large variations for both rippling wave and voltage potential.

With respect to claim 9, the combined teaching of Yamashiro et al., Fig. 1, and Applicant Admitted Prior Art, Fig. 2, discloses that the rectifying circuit is comprised of a rectifier [22], a filter [C2], and a voltage limiter [2].

With respect to claim 10, the combined teaching of Yamashiro et al., Fig. 1, and Applicant Admitted Prior Art, Fig. 2, discloses that the second voltage is an ideal DC voltage.

With respect to claim 11, the combined teaching of Yamashiro et al., Fig. 1, and Applicant Admitted Prior Art, Fig. 2, discloses that the second voltage is smaller than the first voltage [*via step down circuit*].

With respect to claim 12, the combined teaching of Yamashiro et al., Fig. 1, and Applicant Admitted Prior Art, Fig. 2, discloses that the step-down clamping circuit further includes: a resistance [R1], a capacitance [C2], and a clamping circuit [Q15].

With respect to claim 13, the combined teaching of Yamashiro et al., Fig. 1, and Applicant Admitted Prior Art, Fig. 2, discloses that the clamping circuit includes a P-type metal oxide semiconductor (PMOS) [Q8, Q14, Q21] and an N-type metal oxide semiconductor NMOS [Q1-Q4].

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Citation of Relevant Prior Art

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Prior art Terashi (U.S. Patent No. 6,646,426) discloses a current mode DC/DC regulator having function for detecting input and output of current and voltage.

Prior art Toshinari et al. (U.S. Patent No. 6,044,003) discloses a piezoelectric transformer-inverter.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Linh M. Nguyen whose telephone number is (571) 272-1749. The examiner can normally be reached on Alternate Mon, Tuesday - Friday from 7:00 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on (571) 272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LMN



**LINH MY NGUYEN
PRIMARY EXAMINER**